



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C07K 1/00, 14/00, A61K 38/00	A1	(11) International Publication Number: WO 00/58341 (43) International Publication Date: 5 October 2000 (05.10.00)																				
<p>(21) International Application Number: PCT/US00/08519</p> <p>(22) International Filing Date: 30 March 2000 (30.03.00)</p> <p>(30) Priority Data: 60/127,239 31 March 1999 (31.03.99) US</p> <p>(71) Applicant (for all designated States except US): YALE UNIVERSITY [US/US]; 155 Whitney Avenue, New Haven, CT 06520-8336 (US).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): CAPPELLO, Michael [US/US]; 99 Marvel Road, New Haven, CT 06515 (US). CHADDERDON, Robert, C. [US/US]; 42 Wolf Road, Unit 113, Lebanon, NH 03766 (US). DEL VALLE, Antonio [US/US]; 140 Mill Street, Apt. 20-157, East Haven, CT 06512 (US). HARRISON, Lisa, M. [US/US]; 21 Marldon Road, RR # 3, Brookville, CT 06804 (US).</p> <p>(74) Agent: KRINSKY, Mary, M.; 79 Trumbull Street, New Haven, CT 06511-3708 (US).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>																				
(54) Title: HOOKWORM PLATELET INHIBITOR																						
<p>(57) Abstract</p> <p>An inhibitor of platelet aggregation and adhesion is purified and characterized from soluble protein extracts of adult <i>Ancylostoma caninum</i> hookworms, and then cloned and sequenced. The inhibitor blocks platelet aggregation in response to a variety of agonists, interfering with the binding of at least one cell surface integrin with its respective ligand. Embodiments include inhibition of the binding of fibrinogen to cell surface integrin GPIIb/IIIa ($\alpha_{IIb}\beta_3$) and inhibition of the binding of collagen to cell surface integrin GPIa/IIa ($\alpha_2\beta_1$). Medical and veterinary pharmaceutical and immunological compositions containing the platelet inhibitor, and methods of using it, are described.</p> <div data-bbox="1036 1083 1451 1929"> <p>A</p> <table border="1"> <caption>Data for Figure A: Platelet Aggregation</caption> <thead> <tr> <th>Agonist</th> <th>Aggregation (mOD_{600nm}/min)</th> </tr> </thead> <tbody> <tr> <td>Epinephrine</td> <td>~15.5</td> </tr> <tr> <td>Thrombin</td> <td>~14.0</td> </tr> <tr> <td>ADP</td> <td>~15.0</td> </tr> </tbody> </table> <p>B</p> <table border="1"> <caption>Data for Figure B: Platelet Adhesion</caption> <thead> <tr> <th>Hookworm Extract (µg)</th> <th>Adhesion (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>100</td> </tr> <tr> <td>2</td> <td>~60</td> </tr> <tr> <td>4</td> <td>~50</td> </tr> <tr> <td>8</td> <td>~30</td> </tr> <tr> <td>14</td> <td>~25</td> </tr> </tbody> </table> </div>			Agonist	Aggregation (mOD _{600nm} /min)	Epinephrine	~15.5	Thrombin	~14.0	ADP	~15.0	Hookworm Extract (µg)	Adhesion (%)	0	100	2	~60	4	~50	8	~30	14	~25
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